

ABSTRACT OF SANITARY REPORTS.

VOL. V.

WASHINGTON, D. C., JULY 25, 1890.

No. 30.

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UNITED STATES.

SPECIAL REPORTS.

New York—Leprosy.

The following has been received :

HEALTH DEPARTMENT,
New York, July 22, 1890.

DEAR SIR: We have a case of leprosy here in the person of Emanuel Garucia, a native of Yucatan, now residing at 105 East 28th street.

He is a minor, and has been a resident of this city with his parents for one year. He is anxious to enter a hospital.

* * * * *

I have the honor to be, respectfully,

CYRUS EDSON, M. D.,
Chief Inspector.

DR. JOHN B. HAMILTON.

Reports of States, and yearly and monthly reports of cities.

ALABAMA—*Mobile.*—Month of June, 1890. Population, 40,000. Total number of deaths, 102, including phthisis pulmonalis, 10 ; measles, 2 ; croup, 2 ; and enteric fever, 2.

CALIFORNIA—*Oakland.*—Month of June, 1890. Population, 60,000. Total number of deaths, 64, including diphtheria, 1 ; scarlet fever, 2 ; and enteric fever, 1.

Phthisis pulmonalis caused 5 deaths ; bronchitis, 2 ; pneumonia, 5.

Sacramento.—Month of June, 1890. Population, 30,000. Total number of deaths, 23, including diphtheria, 1.

Phthisis pulmonalis caused 5 deaths, and pneumonia, 3.

San Francisco.—Month of June, 1890. Population, 330,000. Total number of deaths, 544, including diphtheria, 17 ; croup, 5 ; measles, 3 ; and enteric fever, 7.

Phthisis pulmonalis caused 65 deaths ; bronchitis, 21 ; pneumonia, 45.

CONNECTICUT—*New Haven.*—Month of June, 1890. Population,

85,000. Total number of deaths, 134, including phthisis pulmonalis, 21; diphtheria and croup, 7; and whooping-cough, 3.

FLORIDA—*Alachua County*.—Month of June, 1890. Population, 35,000. Total number of deaths, 23, including phthisis pulmonalis, 2; and enteric fever, 3.

MICHIGAN.—Week ended July 5, 1890. Reports to the State board of health, Lansing, from 63 observers, indicate that enteric fever, cerebro-spinal meningitis, and inflammation of brain increased, and that typho-malarial fever, puerperal fever, scarlet fever, and bronchitis decreased in area of prevalence.

Diphtheria was reported at 17 places; scarlet fever at 17 places; enteric fever, increased by 33 per cent., was reported at 8 places; and measles at 34 places.

MINNESOTA—*Minneapolis*.—Month of June, 1890. Population, 200,000. Total deaths, 198, including enteric fever, 4; diphtheria, 7; measles, 3; scarlet fever, 2; whooping-cough, 1; and phthisis pulmonalis, 17.

MISSOURI—*St. Louis*.—Month of June, 1890. Population, 450,000. Total number of deaths, 1,004, including phthisis pulmonalis, 70; scarlet fever, 12; diphtheria, 16; enteric fever, 8; and whooping-cough, 3.

TENNESSEE—*Chattanooga*.—Month of June, 1890. Population, 40,000. Total deaths, 74, including phthisis pulmonalis, 11; enteric fever, 2; measles, 1; and whooping-cough, 1.

Publications received.

First annual report of the Florida State board of health, Jacksonville, May 5, 1890.

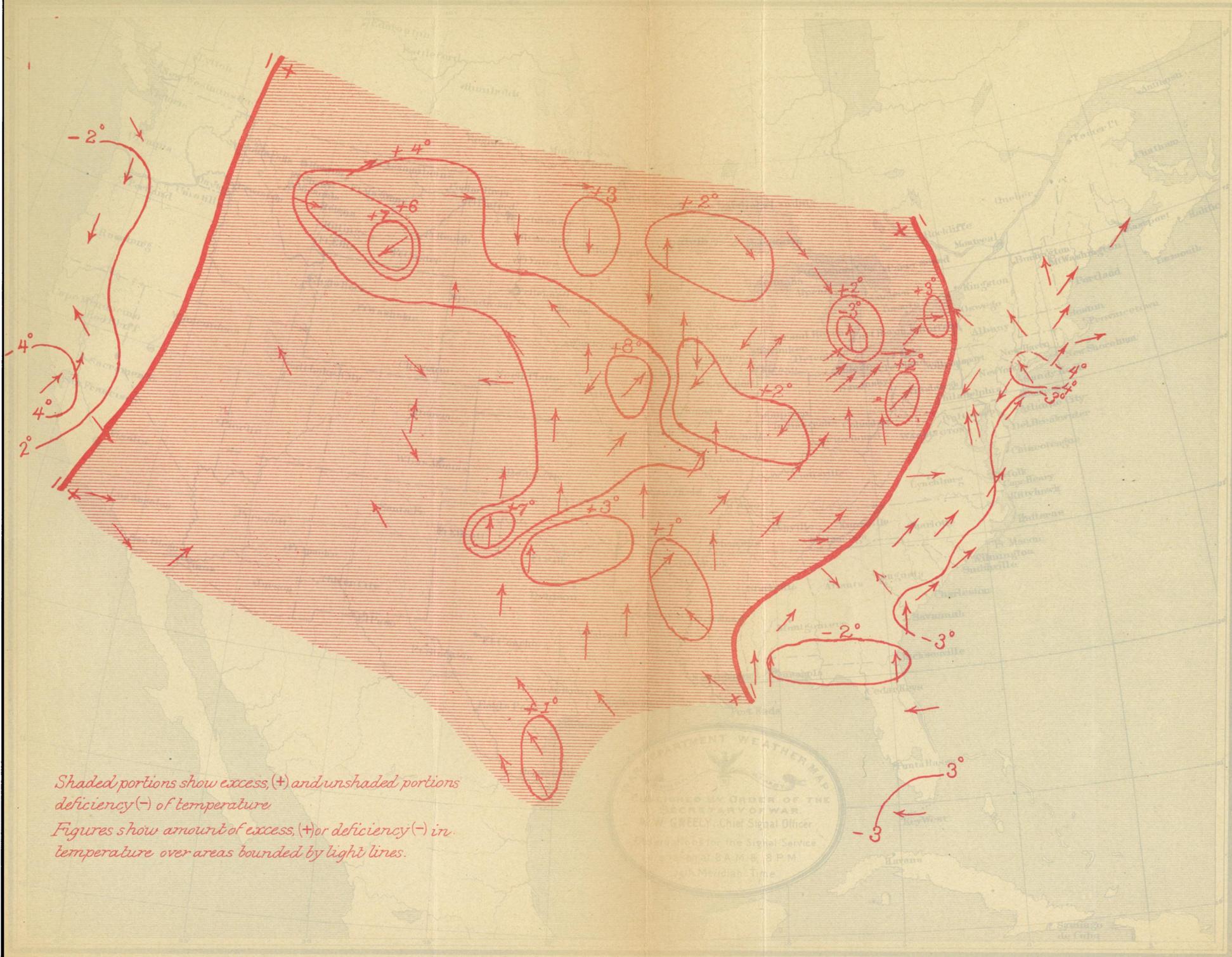
Temperature and precipitation, week ended July 19, 1890.

[Received from the Signal Office, War Department.]

TEMPERATURE.

The temperature for the week ending July 19 has been below the average on the Atlantic coast from Maine to Florida, the greatest departure being in extreme southern New York, where the average daily temperature has been 4° below the average. Immediately on the coast, from New Jersey southward to Florida, it has been about 3° below. In the Lake region, central valleys, and extreme Northwest the temperature has been above the average, ranging from 2° to 3° in the Lake region, Minnesota, and the Dakotas. The greatest departures have been in central Iowa, extreme northwestern Texas, and in southern Montana, where the daily temperature was from 6° to 8° higher than usual. On the Pacific coast there has been a daily deficiency in temperature of from 2° to 4°.

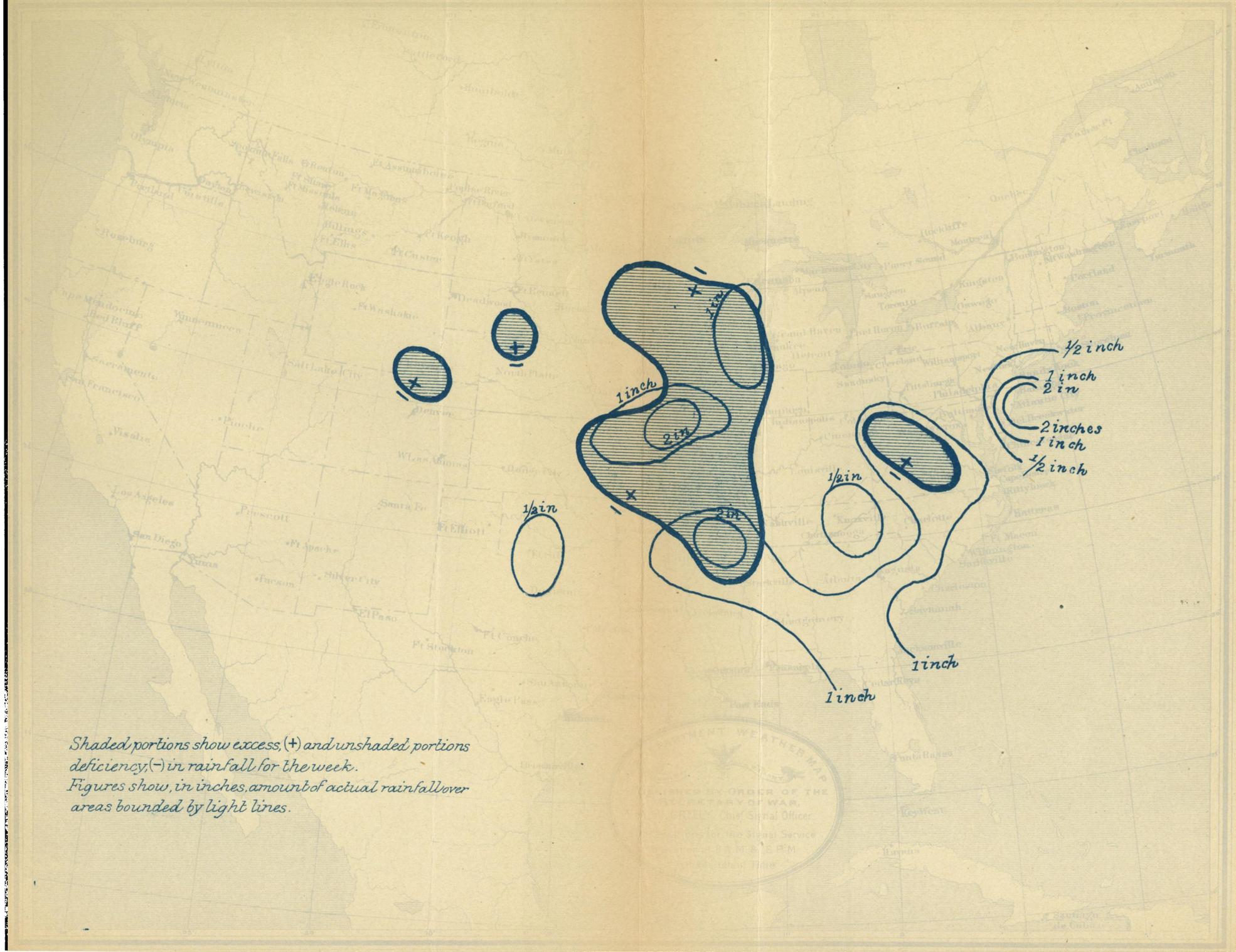
*Temperature and Prevailing Direction of Wind, week ending
July 18th 1890.*



*Shaded portions show excess (+) and unshaded portions
deficiency (-) of temperature*

*Figures show amount of excess (+) or deficiency (-) in
temperature over areas bounded by light lines.*

Rainfall, week ending July 18th 1890.



The temperature for the season, from January 1 to July 19, has been above the average in all districts, except in Minnesota, upper Michigan, the western portion of the Dakotas, the extreme Northwest, and on the Pacific coast. The daily excess of temperature for the season has ranged from 3° to 4° in the middle and south Atlantic States, and about 2° in the central valleys and the lower Lake region. In the northwestern States and Territories it has been from 2° to 4° below, and from 1° to 2° below on the Pacific coast. The season is in advance about one week in the lower Lake region, the middle and south Atlantic States, and in Tennessee and the Ohio valley; in the other districts east of the Mississippi River the seasonal progress has been about normal.

PRECIPITATION.

The rain-fall for the week has been below the average, except in southern portions of Minnesota and Wisconsin, Illinois, and Missouri, eastern Iowa, and western Tennessee, where there has been an excess ranging from a half inch in the upper Mississippi valley to an inch and a half in western Tennessee. There has been a slight excess in West Virginia and the central portions of Virginia. The deficiency in the Lake region, the middle Atlantic States, Tennessee, and Ohio valley has been from one-half to one inch; in the Gulf States the deficiency ranges from one inch to one inch and a half. The rain-fall on the Pacific coast has been normal.

The seasonal rain-fall has been in excess in the Lake region, Tennessee, and the Ohio valley, and in Arkansas and southern Missouri. There has been a deficiency in the Missouri valley, the northwestern States and Territories, and in the south Atlantic and Gulf States, except Texas. In the Lake region the excess has ranged from 10 to 20 per cent.; in western Pennsylvania, central parts of Ohio and Indiana there has been from a third to a quarter more rain than usual for the season. In portions of West Virginia an excess of more than 50 per cent. is reported. In the Missouri valley and the northwestern States and Territories the rain-fall has been from 65 to 90 per cent. of the normal. The greatest excess of rain-fall has occurred in western Pennsylvania, western Virginia, and eastern Ohio, where from 8 to 13 inches more rain than usual has fallen since the 1st of January. In the east Gulf States the seasonal deficiency is from 12 to 18 inches.

The following heavy rain-falls, in inches, were reported during the week: Arlington, Tenn., 5.00; Grand Junction, Tenn., 3.20 and 2.90; Corinth, Miss., 2.60; Devall's Bluff, 1.90; Columbia, Mo., 2.00; Blackville, S. C., 1.70; Waynesborough, Ga., 1.60; Valentine, Nebr., 3.32; and Omaha, Nebr., 2.58.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated popula- tion.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping- cough.
New York, N. Y.	July 19	1,633,748	941							5	7	13	11	15
Philadelphia, Pa.	July 12	1,064,277	553							13	2	10	1	4
Brooklyn, N. Y.	July 19	871,852	523							1	2	17	2	11
Baltimore, Md.	July 19	500,343	248							9	1	4	1	3
St. Louis, Mo.	July 12	450,000	198							2	3	3	3	3
Boston, Mass.	July 19	420,000	219							1		7		1
Cincinnati, Ohio.	July 18	325,000	123							6		3		
Cleveland, Ohio.	June 28	280,000	77							6		3		
Cleveland, Ohio.	July 5	280,000	93							4	1	5	1	3
Washington, D. C.	July 19	250,000	122							10			1	1
Pittsburgh, Pa.	July 19	240,000	125							6		5	5	
Louisville, Ky.	July 19	227,000	73							4	1			
Minneapolis, Minn.	July 12	200,000	51							1				
Minneapolis, Minn.	July 19	200,000	60							1		3		
Kansas City, Mo.	July 12	150,000	70							3				
Rochester, N. Y.	July 5	130,000	26											
Rochester, N. Y.	July 12	130,000	45								1	1		
Providence, R. I.	July 19	130,000	62											
Richmond, Va.	July 12	100,000	37										1	
Nashville, Tenn.	July 19	72,256	38							1				1
Fall River, Mass.	July 19	69,000	48											
Charleston, S. C.	July 19	60,145	34							2				1
Toledo, Ohio.	July 19	50,000	26									1	1	
Manchester, N. H.	July 19	43,700												
Portland, Me.	July 19	42,000	12							1				
Galveston, Tex.	July 4	40,000	18											
Galveston, Tex.	July 11	40,000	12										1	
Binghamton, N. Y.	July 19	35,000	13											
Yonkers, N. Y.	July 19	31,949	23									1		
Newport, R. I.	July 17	19,566	3											1
Rock Island, Ill.	July 13	16,000	3											
Pensacola, Fla.	July 12	15,000	11							2				

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended June 28 corresponded to an annual rate of 16.9 a thousand of the aggregate population, which is estimated at 9,715,559. The lowest rate was recorded in Bradford, viz, 10.6, and the highest in Manchester, viz, 27.1 a thousand. Diphtheria caused 6 deaths in Manchester, 2 in Salford, 2 in Sheffield, and 2 in Sunderland.

London.—One thousand three hundred and forty-six deaths were registered during the week, including measles, 101; scarlet fever, 7; diphtheria, 24; whooping-cough, 52; typhus fever, 2; enteric fever, 9; and diarrhoea and dysentery, 51. The deaths from all causes corresponded to an annual rate of 15.9 a thousand. Diseases of the respiratory organs caused 206 deaths. The Metropolitan Asylum and London Fever Hospitals contained 1,247 scarlet fever patients at the end of last week, the numbers on the three preceding Saturdays having increased from 1,133 to 1,196; 136 cases were admitted during the week, against 104 and 143 in the two preceding weeks. The deaths from diphtheria, which had been 24 and 19 in the two previous weeks, increased again last week to 24, and exceeded the corrected average by 7. In greater London, 1,695 deaths were registered, corresponding to an annual rate of 15.3 a thousand of the population. In the "outer ring" the deaths included measles 15 and whooping-cough 16.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended July 5, in the 16 principal town districts of Ireland, was 19.8 a thousand of the population. The lowest rate was recorded in Newry, viz, 0.0, and the highest in Drogheda, viz, 46.5 a thousand. In Dublin and suburbs 156 deaths were registered, including typhus, 1; enteric fever, 2; and whooping-cough, 4.

Scotland.—The deaths registered in eight principal towns during the week ended July 5 corresponded to an annual rate of 19.9 a thousand of the population, which is estimated at 1,345,563. The lowest mortality was recorded in Perth, viz, 12.5, and the highest in Glasgow, viz, 24.4 a thousand. The aggregate number of deaths registered from all causes was 514, including measles, 28; scarlet fever, 3; diphtheria, 7; whooping-cough, 24; fever, 4; diarrhoea, 10; and croup and laryngitis, 5.

CANADA—*Three Rivers.*—The United States consul, under date of July 10, 1890, states that only 21 deaths were reported for the month of June, in this city, and no case of contagious disease.

Coaticook.—A report has been received from the United States consul,

under date of July 7, 1890, stating that this consulate and the five consular agencies connected with it are in good sanitary condition, no evidence of any epidemic having appeared.

FRANCE—*Marseilles*.—Month of June, 1890. Population, 376,143. Total number of deaths, 1,122, including enteric fever, 42; small-pox, 32; diphtheria and croup, 57; measles, 66; and whooping-cough, 6.

SPAIN—*Cholera*.—The Department of State transmits the following reports from the *chargé d'affaires* at Madrid :

JUNE 30, 1890.

The usual number of new cases and deaths from cholera are happening in the province of Valencia; each day some new town seems to be afflicted. The newspapers of this morning speak of alarming rumors of a great increase in Gandia, and in addition to cholera they have reported 276 cases of measles. The new towns where cholera has appeared are Beniopa, Enova, Lugar nuevo de San Geronimo, Lucca, Tavernes de Valdigna, Rufal, Lolem, Beniatjar, and Ayelo.

JULY 3, 1890.

As the Government has ceased issuing daily bulletins of cholera cases I must rely on the press dispatches, which, I think, are not to be entirely trusted. The disease has appeared at the following new places: Otos, Cuatretonda, Alcantara, Benicolet, Senera, Acavo, Benipeixcar, and at Regoa, in the province of Duero, Portugal. At Gandia, yesterday, were 15 new cases and 2 deaths. All travelers from Spain to France are disinfected at the frontier. Two deaths from supposed cholera took place in Madrid yesterday.

JULY 6, 1890.

The following are deaths and new cases from cholera for the twenty-four hours ending midnight July 5, and the villages where they occurred :

	<i>Deaths.</i>	<i>New cases.</i>
Alcira.....	1	5
Benifaire.....	2	1
Beniopa.....	4	2
Gandia.....	22	13
Lucca.....	1	4
Cullera.....	3	6
Mojente.....	1	1
Otos.....	0	2
Protoreo.....	3	11
Cuatrotondos.....	1	0
Dairnez.....	0	2

Reports had not been received from some thirty other villages where the epidemic exists.

JULY 7, 1890.

I have the honor to report the following places in Spain where deaths and new cases of cholera have occurred, with the number of each during the last twenty-four hours :

	<i>Deaths.</i>	<i>New cases.</i>
Gandia.....	6	26
Beniopa.....	0	2
Otos.....	1	1
Aleira.....	0	4
Mojente.....	2	2
Valencia (city).....	1	1
Madrid.....	1	1

The cases in Valencia and in the city of Madrid are the first cases of cholera outside of the infected district.

JULY 8, 1890.

I have the honor to inclose a clipping from *El Imparcial*, together with a translation of the same, giving the supposed cause of the appearance of cholera in the province of Valencia.

[Inclosure.]

Translation relative to the origin of cholera epidemic in Valencia, Spain, 1890 (from the Imparcial).

After many discussions, scientific men have not as yet come to any definite accord in regard to the character of the disease now prevailing in some of the towns of the Valencian region. It is known that some prominent physicians have not admitted that the disease presents any symptoms of cholera, while others, not less distinguished, have assured, in a most decided manner, that the disease in question is Asiatic cholera (*cólera morbo epidémico*).

Against the opinion of the latter it is argued that, from the minute inquiries made in search of the origin of the epidemic, it has not been proved that it has been imported through any vessel touching our shores or persons arriving from infected places.

We respect the contradictory opinions of scientific men, but as all that concerns public health becomes a matter of great interest, we think it our sacred duty to give publicity to what has been communicated to us through a letter we have received from Valencia, since this might contribute to throw some light on this question, not yet resolved, though it has been the subject of so much discussion.

The letter to which we have made reference states that a certain person, whose name is omitted, a resident of Puebla de Rugat, had in his possession a flask containing the substance which serves for the anti-choleric inoculation, so much used, in 1885, in the province of Valencia. It adds that a servant girl of the person alluded to accidentally broke the mentioned flask, the contents of which she carefully collected and threw on a pile of mud there was in the middle of the square of that town.

If the fact be true, and we do not believe it is impossible to be proved, the opinion of the physicians who hold that the disease in question is Asiatic cholera would have a satisfactory explanation.

The United States consul at Barcelona, under date of June 28, 1890, reports as follows concerning the infected districts:

The cholera appears not to have made much progress, if any, since my last report to you. In Valencia there have been no suspicious cases since the two that were reported to the authorities there on the 17th instant. In the villages adjacent to Puebla de Rugat several cases have appeared, but the mortality has not been great nor alarming. The belief seems to be growing that the disease is not even ordinarily virulent, and that it is endemic rather than epidemic. From my agent at Grao de Valencia I have received the following statistics:

On the 22d instant, in Puebla de Rugat, 1 case, no deaths; in Villanueva de Castellon, 4 cases, 2 deaths; in Montichelvo, 2 cases, no deaths;

in Gandia, no cases, 2 deaths; in Albaida, 1 case, 1 death; in Manuel, 1 case, 1 death. On the 23d instant, in Gandia, 2 cases, no deaths; in Montichelvo, 1 case, no deaths; in Manuel, no cases, 1 death; in Beniganim, no cases, 2 deaths. On the 24th instant, in Fenuollet, 1 case, no deaths; in Gandia, 5 cases, 1 death.

All my other agents report unusually good health in and near their agencies. Still, inasmuch as the authorities suppress facts and figures relating to infectious diseases as long as they can, even the most favorable reports are of doubtful significance.

Already twice rumors have spread here in Barcelona that we have a few cases among us here and in Barceloneta, and said rumors have been very generally believed in. The result of all this cholera talk has been that Spain has been scoured and cleaned from north to south and east to west, than which there could be no result more satisfactory and beneficial.

Under date of July 3, 1890, the following report was received from the same consul:

In the province of Valencia there were 63 cases of cholera and 37 deaths from the morning of June 25 to the night of June 30.

The health reports from all my other agencies are excellent.

Gandia.—The United States vice-consul at Denia writes the Department of State the following letter relative to cholera in Gandia, under date of June 26:

I beg to confirm my cable of date, viz: *Cholera officially declared in Gandia.*

The town of Gandia is about 10 miles from here, and has some 12,000 inhabitants, and is under this consulate.

The district of Gandia comprises 26 towns.

The official newspaper in Madrid, *La Gaceta*, reports the cases and deaths from the commencement as follows, viz:

	<i>Cases.</i>	<i>Deaths.</i>
Suebla.....	144	83
Montichelvo.....	17	9
Gandia.....	10	7
Albaida.....	2	2
Carcagente.....	2	0
Beniganim.....	3	3
Castellon de Rugat.....	2	1
Other small towns.....	15	10
Total.....	195	115

So far the city has enjoyed good health and without any cases of cholera, although any one leaving here for other cities will be subject to three days of quarantine.

GERMANY—*Breslau.*—Month of May, 1890. Average rate of deaths for the month on the yearly rate per 1,000 inhabitants, 27.6. The death rate was the smallest average per 1,000 inhabitants for May in 14 years; the highest having been that of May, 1876, 41.6 to the 1,000 inhabitants, caused by an epidemic of measles. Died of scarlet fever, 4; diphtheria, 22; typhus, 5; phthisis pulmonalis, 66.

In the various hospitals of the city there were 1,615 patients on May 1, and 1,522 on May 31; total inmates during the month, 3,052.

In explanation of the large number of persons treated in hospitals, it may be said that here it is the custom for many, especially of the poorer and serving classes, to enter a hospital at once on being taken sick, because the attendance and care is much better than they would receive at home.

Chemnitz.—Sanitary report for the month of June, 1890. The following is furnished by the United States consul :

The population resident in the consular district of Chemnitz is at present in an extremely healthy condition. Excepting the visitation of influenza last winter, which was apparently universal, Chemnitz has had no epidemic to deal with since the typhus was here in 1888. No sporadic cases of contagious, infectious, or pestilential diseases have been reported to or discovered by the sanitary officers or the physicians in this district within the year.

There has been no hot weather, and no radical changes of temperature have been experienced. Atmospheric conditions have been conducive to health, and frequent showers have kept the sewers in a cleansed condition.

The board of health of Chemnitz is in harmony with the United States consulate, and will give our Government immediate and special notice of the appearance of any contagious disease or dangerous malady here. Should the necessity seem to warrant it, you will receive instant information in this regard by cable.

SWITZERLAND—*Zurich.*—Month of May, 1890. Population, 91,323. Total number of deaths, 129, including phthisis pulmonalis, 26; typhus, 1; scarlet fever, 2; diphtheria and croup, 3; and whooping-cough, 1.

GREECE—*Athens.*—The United States consul, through the Department of State, transmits the following, under date of June 30, 1890 :

The Greek Government, by royal decree of the 26th instant, has declared a five days' quarantine against vessels arriving from ports on the Spanish coast. This is on account of cholera reported as prevailing there. Similar reports from Italy are officially denied and discredited.

MOROCCO—*Tangier.*—The United States consul, under date of June 24, 1890, writes as follows :

I beg to inform you that, owing to the appearance of cholera at Valencia, and yellow fever at Malaga, Spain, the Morocco board of health has decided to subject all vessels arriving from the Mediterranean ports of Spain to five days' quarantine, and three days to those arriving from Cadiz, Gibraltar, Ceuta, and Melilla.

Vessels arriving with foul bills of health will be ordered to leave the ports of Morocco.

I have notified by cable the above decision to the commander of the sloop-of-war *St. Mary*, now lying at Lisbon.

ALGERIA—*Algiers*.—The following report has been received from the United States consul under date of June 27, 1890:

I have the honor to inform you that, according to a decree issued on the 26th instant by the Governor-General of Algeria, a quarantine of five days at the ports of the department of Oran, four days at those of the departments of Algiers and Constantine, to be counted from the date of a medical inspection to take place after the entry of the ships, has been imposed on all arrivals from Spain, including the Balearic Isles and the Zafarine Islands, Morocco.

The importation of rags, wearing apparel, and bedding articles from Spain into Algeria is prohibited, and all personal effects are to be submitted to disinfection.

The sanitary measures have been adopted on account of the appearance of cholera in Spain.

MEXICO—*Merida*—*Yellow fever*.—Dr. Manuel R. Moreno, United States sanitary inspector, forwards the following report of his inspection tour through Progreso and Merida, Mexico; Colon, United States of Colombia; and Puerta Limon, Costa Rica, under date of July 10, 1890:

When I accepted the commission with which you honored me, I did not count upon the difficulties that were before me at Colon, Limon, Progreso, and Merida; first, owing to the shortness of time, and second, to the want of data and of regular physicians who could help me in my investigations as sanitary inspector.

The city of Colon, or Aspinwall, at which I arrived after having visited Puerto Limon, in Costa Rica, where I had to lose four days in waiting for a steamer, has a population of from two to three thousand people, composed principally of negroes from Jamaica, who have come to work on the canal.

I found no case of yellow fever in Aspinwall, and I owe to the kindness of the vice-consul (Mr. Vigneau) the help which I had from the authorities in the discharge of my commission. The city is divided into two districts or wards. The one on the left, known as Aspinwall or the North American District, is clean and healthy, with nice stone-paved streets, sewerage to the sea, and potable cistern water. It is inhabited by Americans, and resembles a city of the United States.

To the right and at the entrance of the canal, which has 30 miles of navigable water, is the district called Christopher Columbus, clean and in very good condition. I am not able to say the same of the center and balance of the city, as it is in a very bad state; its streets are low, dirty, and marshy; its principal street, boarded and covered with trash, being a constant focus of fevers.

I visited several establishments kept by negroes, Chinese, and Jews, which were uncleanly and wanting in ventilation, drainage, and sewerage.

The hospitals are good, well ventilated, and attended by regular physicians.

During my stay in Colon (May), notwithstanding the bad hygienic condition, the health was comparatively good, as, after careful investigation, I was not able to find a single case of yellow fever; all were of malaria, of intermittent type.

The geographical position of Colon, its communication with some of the ports of the United States, and its bad hygienic condition make it a constant danger to the United States.

Puerto Limon is situated on a beautiful beach, with a population of 1,000 inhabitants. I visited it with Mr. Brown, United States vice-consul. Its streets are wide, sandy, and in a very good, healthy condition. It has a hospital belonging to the American Railroad Company, and to their superintendent, Mr. Minor C. Keith, and to the physician in charge of the hospital, Dr. Edward Austin, who graduated from Bellevue Medical Hospital, I owe all that I learned towards the fulfillment of my commission.

The hospital is of wood and of American construction, two stories high, and situated on the edge of the sea. It has accommodations in its well-ventilated wards for more than one hundred patients. All the patients belonging to the black race are from Jamaica, and are employed on the railroad. The hospital has on its front a park of 2 acres in size, and is surrounded by two-storied cottages. The population, with the exception of the American Railroad employés, is composed of negroes.

The following hospital report will show the classes of fevers that have reigned there for the last year :

Synopsis of hospital report—Limon, Costa Rica.

1889.

Diseases.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Fever, intermittent quotidian	14	8	12	7	26	11	7	12	12	4	1	6
Fever, intermittent tertian	4	1	1	.....	1	2	3	2	.....	.....	1	1
Fever, remittent	3	12	1	2	4	.....	.....	4	3	1	2	1
Fever, yellow .....	.....	.....	.....	.....	.....	.....	.....	3	2	3	.....	.....
Total	21	21	14	9	31	13	10	21	17	8	4	8

1890.

Fever, intermittent quotidian	9	7	7	11	9	.....	.....	.....	.....	.....	.....	.....
Fever, intermittent tertian	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fever, remittent .....	.....	.....	2	3	1	.....	.....	.....	.....	.....	.....	.....
Fever, yellow	3	2	1	2	1	.....	.....	.....	.....	.....	.....	.....
Total	13	9	10	16	11	.....	.....	.....	.....	.....	.....	.....

The above report is taken from the books of the hospital, and is due to the courtesy of Dr. Austin, the only regular physician there, and he is to be relieved by Dr. Singer, to-day in charge of the Charity Hospital of Galveston, Tex.

The heat, like that of Colon, is very suffocating ; the thermometer marking 85°, 84°, and 95° the maximum, and in winter the maximum is 65°.

According to information received from Dr. Austin and Mr. Brown, the United States vice-consul, the eight cases of yellow fever that are registered in the hospital books (the only place from which statistics can be obtained) were employés of the North American Railroad Company not acclimated, and they brought the same from Colon.

The statement of fevers here given, with other diseases treated, rises to the enormous sum of 312, in the following manner: January, 74; February, 61; March, 70; April 67, as taken from the records of the hospital.

The city and port of Progreso, situated in the state of Yucatan, is surrounded by marshes, with reigning winds from the east and south-east.

I found nothing there worth mentioning to you. The climate is salubrious and the health can not be improved, as you will perceive by the following statistics:

In 1819 it had a population of 4,602; births, 182; deaths, 171; leaving a difference of 11 in favor of the births. Among the deaths I find there were 81 children under the age of 11 years. These deaths could not be classified, there being no specific causes of deaths given in the register.

Merida, nearly 24 miles distant from Progreso, had, in 1888, an official population of 47,448, and, up to June 1889, 47,034. It is calculated that the right population is from 60,000 to 70,000.

The state of Yucatan, of which Merida is the capital, had a total population in 1888 of 283,016, and in the first six months of 1889, 282,502, making a decrease of 514 inhabitants, with marriages, 1,394; births, 6,608; and deaths, 7,122. Comparing the census in 5 years, I have found, in 1885, population 280,425, and in 1889, 282,502, making in 5 years a difference of 2,077. Too much negligence is noticed among the authorities in fulfilling their first duty relative to the health of the state. There is no board of health, its streets are narrow and filthy, badly ventilated, with little sewerage, and, unlike Colon and Limon, without potable water. When the rainy season comes its streets are impassable, as rain has to be absorbed from such streets and evaporated by a tropical sun. When these streets are dried they leave a bad odor.

From January to June of this year they have registered the enormous number of 925 deaths, against 627 births.

Accompanied by Mr. Gilkey, D. D. S., vice-consul and deputy United States consul, I had the opportunity of visiting the civil hospital situated at the entrance of the city and near the railroad station. It is a large stone building, two stories high, built in the time of Spanish dominion for a convent of Franciscan monks, and after these were expelled by the Government it was taken for a city hospital. It is badly ventilated, damp, and so dark that the sunlight never reaches the wards, which are 7 by 8 feet, entirely too small to contain so many patients (8 or 10), in very bad beds. The walls are very dirty and everything is in a lamentable state of misery.

The lower floor is used for a lunatic asylum, divided into small dirty rooms. The inmates, poorly clad and nearly naked and without any medical attendance, are more jailed than in an asylum.

The wards of the second floor are divided into a parlor of medicine and of surgery, respectively, and like those of the first floor have nauseous and putrid odors. The stock of drugs is too small for the use of the hospital.

Patients with all classes of diseases are admitted to this hospital, very much to the discredit of Merida, as it is a rich city. Any person can visit the hospital whether there are contagious diseases there or not, and no measures are taken to separate the contagious from the non-

contagious, so as to avoid the spreading through the city of all classes of diseases.

Yellow fever is endemic to-day in Merida, having made its appearance in January, attacking the non-acclimated; only one case being a native of Merida.

Piedras Negras.—The following report is received from the United States consul, under date of July 15, 1890:

Owing to the prompt measures taken by the local authorities, the small-pox cases are rapidly diminishing, and all fears removed that this disease will spread.

The official report on Saturday, July 12, was 29 cases, 8 severe and 22 mild.

WEST INDIES—*Guadeloupe.*—The United States consul, under date of June 25, 1890, reports Guadeloupe as in good sanitary condition and as having been in such condition for the past two years.

CUBA—*Havana.*—Under date of July 12, 1890, United States Sanitary Inspector Dr. J. L. Posey reports that during the past month, and up to present date, small-pox, which threatened at the outset to become epidemic, has almost disappeared. Yellow fever steadily increases each week, particularly in the Military Hospital, which has the largest number of cases. Typhoid fever also prevails to a great extent in all the hospitals and in the city. There have been a large number of cases of "cholera" among children, and diarrhoea among adults.

BRAZIL—*Pará.*—Month of June, 1890. Population, 80,000. Total number of deaths, 173, including beri-beri, 15, and enteric fever, 1.

The ground-water and drinking-water theories of the etiology of cholera.

[Translated for this Bureau from the *Annales de l'Institut Pasteur*, Paris, May, 1890.]

The theories of the etiology of cholera, known as the ground-water theory and the drinking-water theory, and which are represented by the Berlin and Munich schools, continue to excite much controversy in Germany. The question of practice is the animating motive of the discussion. The theory, which attributes microbial disease to the transmission of germs by means of drinking water, is clear, simple, and definite in its indications, and, consequently, in the prophylactic measures it suggests. The Pettenkofer or ground-water theory makes the evolution of a sporadic case or of an epidemic depend on a host of factors against which it is impossible to guard.

The city of Munich has a strong underlying body of subterranean water, the variations in the level of which are constantly observed in the numerous wells in the city. The epidemic at Munich, in 1854, was preceded by a remarkable elevation, and accompanied by as remarkable a depression of the level of this subterranean water. According to the ground-water theory, a close relation exists between these facts and the evolution of the epidemic. The variation of level allows the water to permeate the soil, which it leaves humid on subsidence. The danger

point is reached when the soil has attained the requisite degree of humidity. The cholera germ is innocuous when it leaves the human organism, and to infect another organism it must mature and complete a new phase of its existence outside of man and in a suitable medium. This medium is the soil, moist, aerated, and saturated with impurities.

The school represented by Koch objects to this, that the maturation of the cholera germs in the soil is purely subjective and that none of the pathogenic germs known offer any parallel to the conditions claimed for the germ of cholera. The germs of small-pox and scarlet fever pass directly from one patient to another, and one individual may initiate an epidemic. The bacillus anthracis is not only virulent when it leaves the organism of the animal whose life it has destroyed, but its virulence is increased by transmission through the same species, as has been demonstrated by the studies in septicæmia made by Coze, Feltz, and Davaine. It is true that anthrax is sometimes of telluric origin, and Koch has shown by what means the virulent microbe is conserved, but there is a vast difference between the possibility of the conservation of the bacillus in the soil and the necessity for it to pass through the soil to become virulent. It rests with the advocates of the ground-water theory to show the mechanism for the exodus of the morbid influence from the soil. Vogt attributes its liberation to oscillations in the pressure of the atmosphere, and the expulsion has been accounted for by an elevation of the subterranean level. But Noegeli, Pumpelly, Renk, and Miquel have shown that passage through a layer of humid earth filters a current of air, instead of charging it with germs. When the soil is dry the air current may take up dust in which there are germs, and attrition under the influence of sun and wind may create whirlwinds of dust, the respiration of which is dangerous. But in this case the microbe must support desiccation, and supposing it retained, living and virulent in the air, the means by which it is introduced into the human organism are left undetermined. The way of pulmonary inhalation must be rejected.

Cholera as at present understood is localized in the intestinal canal. The germs might be arrested by the saliva and conveyed to the stomach, but Koch has shown that they can support only a short stay there. The advocates of the ground-water theory, however, accept penetration of the germ into the organism by way of the saliva and reject the transmission by food and water.

Dr. Hueppe, in a recent work, has undertaken to find a common ground on which the two theories may meet. His conception is that the cholera bacillus may, like most pathogenic bacteria, exist in the saprophytic state. Fränkel has demonstrated that it finds in the superficial layers of soil the necessary conditions of temperature, that it resists desiccation and putrefaction and the rivalry of other species. It leaves the soil, not matured, as Pettenkofer claims, but vigorous and capable of resisting the action of the gastric juice, when by deglutition of saliva, respiration, drinking water, or alimentary substances it has reached the stomach. It develops in the intestinal canal, producing the toxic agents that impart to cholera its frightful character. When it leaves the human organism it ceases to be infectious and recovers its virulence by contact with the air or in the soil. If air and oxygen are deficient the germ perishes. If both are present in small quantities it can lead an aerobic existence at the expense of the materials it encounters. If by an elevation of the subterranean waters the multipli-

cation of the germs is arrested in consequence of the diminution or suppression of air they survive or perish according to their powers of resistance. The epidemic is then extinct, or is in a condition to break out again. These variations in the conditions of development may account for the variations of virulence in the bacteria which are so important to an understanding of the *genius epidemicus* of cholera.

Atmospheric bacteria.

[Translated for this Bureau from *La Rivista Internazionale d'Igiene*, Naples, June, 1890.]

The following important conclusions with regard to atmospheric bacteria are formulated from a series of experimental valuations of sea-air, made by Professor Roster in the island of Elba:

1. That the atmosphere of an island contains a much less number of bacteria than that of the main-land, and this irrespective of the direction of the wind with regard to the point of observation.

2. That the oscillations of atmospheric bacteria are much stronger on an island than on the main-land, owing to the alternate prevalence of sea and land breezes.

3. That the number of bacteria diminishes to an extraordinary degree when the wind blows from the sea, and correspondingly increases with the setting in of the land-breeze.

4. That a very small extent of sea will deprive of bacteria air that has passed over the island.

5. That a passage of 10 meters over land will charge the atmosphere with bacteria.

6. That atmospheric bacteria increase in numbers with the velocity of the wind.

7. That rain is a most effective agent for diminishing the number of atmospheric bacteria, whether by direct action in liberating the atmosphere of suspended germs, or by consecutive action in rendering the earth humid and impeding the passage of bacteria from the soil to the air.

8. That the great reservoir of atmospheric bacteria is the superficial soil, from which they are detached and transported by the wind.

Other factors, less energetic than the direction and force of the wind, rain, and the humidity of the soil, but which must be taken into account, influence the quantitative oscillations of atmospheric bacteria. The night air contains fewer bacteria than the air of the day, and the atmospheric bacteria are more abundant in August than during the months of September and October, when the temperature is lower and the fall rains begin.

MORTALITY TABLE—FOREIGN CITIES.

Cities.	Week ended.	Estimated popula- tion.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhusfever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	June 21	5,758,500	1,765					6	18	24	133	
London	June 28	5,758,500	1,695				2	9	15	28	116	
Liverpool	June 28	613,463	219					4	5	1	18	3
Brussels	June 28	477,228	171			1		3	1			
Calcutta	May 31	435,219	147	7		5						
Hamburg	June 21	410,127	257					3	2	6		
Cologne	June 28	283,881	126							4		
Odessa	June 21	276,300	160							1		6
Edinburgh	June 28	271,135	90							1		
Dresden	June 28	269,000	93								2	
Antwerp	June 28	232,418	72									
Bristol	July 5	232,248	53							3		
Havana	July 12	200,000	200		12			4	1		2	
Genoa	July 5	180,362	74			3				3		
Trieste	June 28	158,054	68					1		3		
Funchal	June 28	133,510	32									
Stuttgart	July 5	125,510	60							5		
Barmen	July 5	113,000	52									1
Zurich	June 28	91,323	19				8			1	4	1
Leith	June 28	78,538	25					1		1		
Mayence	June 21	65,802	38					1		3		
Mayence	June 28	65,802	29					1				
Cadiz	June 21	57,157	38							2		
Cadiz	June 28	57,157	37					1		1		
Georgetown, Demerara	June 21	47,175										
Schiedam	July 6	25,600	0									
Gibraltar	June 29	18,381	4									
Matamoras	July 12	16,000	28			3		1				
Flushing	July 5	12,793	3									
Denia	June 29	12,000										
Guelph	July 12	10,173	2									
Tampico	July 7	9,000	8									
Chatham, Ont.	July 12	8,730										
Guaymas	June 30	6,600	19									
Puerto Plata	July 5	4,100	2									
Amherstburg, Can	July 15	3,000										

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